REMARKS

Reconsideration is respectfully solicited.

Claim 18 is amended by adding the limitation recited in cancelled claim 40. Therefore, no new matter has been added. Claim 41 contains a limitation supported by the Examples of the specification; please see Examples 19 and 23. Therefore, no new matter has been added.

In applicants' view, none of the applied art [or concurrently cited art] provides the written description required to constitute an anticipatory reference. Please see section 2131 of the MANUAL OF PATENT EXAMINING PROCEDURE. Therein the MPEP encapsulates the law with respect to 'anticipation' case precedent. The unitary reference applied as an anticipation must provide written description of each and every element of the claim under scrutiny.

In the Present Application:

A photo catalyst layer/adhesive layer/base film is directly laminated, by heat-pressing, onto a metal plate or a resin substrate to form an integral laminate. Specifically, 1) it is the metallic plate or resin substrate on which the photocatalyst-supporting film is laminated, and 2) the supporting film is heat-pressed onto the plate or substrate to form an integral laminate. Neither 1) nor 2) above is disclosed or even suggested in Kimura.

The result of applicants' method, involving the method items 1) and 2), includes superior effects as described in, for example, page 2, last paragraph, page 3, paragraphs 1-3, page 16, lines 11-16, which recites "in the present invention, heating and pressing are employed for the laminating process, which allows to establish firm sticking of the photocatalyst layer to the adhesive layer and to obtain better durability, adherence and anti-exfoliation property than those

before subjecting them to heating and pressing process". Also please see page 38 of the specification. They are not described by, nor suggested, by the prior art.

The Rejection(s)

Applicants respectfully traverse the rejection of claims of the instant patent application over WO97/00314 [based on the description of U.S. 6228480], under 35 U.S.C. 102(b). The Kimura U.S. counterpart of WO97/00314 does not provide written description of each and every element of the rejected application claims. Kimura does not describe a laminate formed by heat-pressing. Please see MPEP Section 2131. The differences between the present invention and WO 97/00134 are as follows:

In the Present Invention:

After the photo catalyst layer of the photocatalyst-supporting film is formed by drying(heating) the coating solution, the photocatalyst-supporting film (photo catalyst layer /adhesive layer/base film) is directly laminated, by heat-pressing at a temperature range from 60 to 200°C, onto a metal plate or a resin substrate to form an integral laminate. Therefore, the photocatalyst-supporting film is heated after forming the photo catalyst layer.

In WO 97/00134:

After the photo catalyst layer of the photocatalyst-supporting film is formed fter the photo catalyst layer of the photocatalyst-supporting film is formed by drying (heating) the coating solution, the photocatalyst-supporting film (i.e., photo catalyst layer /adhesive layer/support/adhesive (i.e., sticker)/detachable PP film) is obtained. When used, the PP films is

peeled off and the rest is attached to a metal place. Therefore, the photocatalyst-supporting film is not heated at a temperature of 60 to 200 °C after forming the photocatalyst layer.

Considering the Examiner's rejection of claim 18 under 35 U.S.C. 102(b) as being anticipated by WO97/00134, it is to be noted that claim 18 of the present invention includes a limitation to the effect that the method comprises the step of:

"heat-pressing the photocatalyst-supporting film onto a surface of a metallic plate or a resin substrate at a temperature range from 60 to 200°C to form an integral laminate"

In the Final Office Action of April 19, 2005, the Examiner states that "one skilled in the art would interpret the term 'laminating' to inherently involve both heating and pressing in such as way as to not destroy the disclosed film or sticker, since that would destroy the disclosed invention of Kimura. And, in any case, at least some additional heat would be generated through at least friction by the winding and pressing as disclosed in Kimura".

However, as described above, the photocatalyst-supporting film of Kimura is not heated after forming the photo catalyst layer. In addition, even if additional heat is generated through friction by the winding and pressing disclosed in Kimura, the additional heat would not reach 60°C which is the lowest temperature in the amended claim 18.

Also, as described by the Examiner in the Final Office Action of April 19, 2005, Kimura fails to disclose the specific temperature of 60 to 200 °C.

Therefore, the amended claim 18 is not anticipated by Kimura and should not be rejected.

Regarding the limitation of the temperature range of 60 to 200 °C, the Examiner states that "it had been obvious ... because Kimura '480 discloses the laminating 'at a process for drying and winding at the drying zone' (see Example 73) and drying the coated substrate at 150 °C or less as a method to carry an adhesive layer on the substrate (see column 6, lines 19 – 27)."

However, the temperature of 60 to 200 °C in the amended Claim 18 is a temperature used when forming an integral laminate after drying the coated substrate, and not a temperature used when drying the coated substrate. Therefore, Kimura does not disclose heating of the photocatalyst-supporting film after forming the photo catalyst layer at the temperature of 60 to 200 °C to form an integral laminate.

The method of the present invention improves the function of the photocatalyst, according to the Declarant of the enclosed DECLARATION. The following experiment is reported. Fulcon KN-C2000 which is a tent cloth canvas produced by KURARAY CO., LTD., including vinyl chloride and plasticizer was used as a polymer resin base.

First, the Fulcon KN-C2000 was cut into A4 size and applied with a coating solution for an adhesive layer and the coating solution was dried for 30 minutes at 60 °C to form an adhesive layer, wherein polysiloxane (Methylsilicate 51, Colcoat Co., Ltd.) in amount of 30% by weight relative to the weight of the acryl-silicon resin and a surface active agent were added to xylene-isopropanol solution (50/50 ratio by weight), which contains an acryl-silicon resin having silicon at a concentration of 3% by weight in an amount of 10 % by weight, to prepare a coating solution for an adhesive layer. The thickness of the adhesive layer was about 0.5 μm.

Next, the Declarant reports, after cooling at room temperature, a coating solution for a photo catalyst layer was applied to the above adhesive layer and dried for 30 minutes at 60 °C, wherein acidic titanium nitrate sol which contains titanium oxide at a concentration of 5% by weight was dispersed in acidic silica nitrate sol which contained silicon oxide at a concentration of 5% by weight in the presence of a surface active agent to prepare a coating solution for a photocatalyst layer. The thickness of the photo catalyst layer was about 0.6 μm.

Then, the dried photo catalyst layer was reheated by spraying high temperature air at 3.0 m/minute.

Based on the above method, samples were obtained. The samples included a photocatalyst-supporting film without reheating, and other samples in which a photocatalyst-supporting film was reheated at 100 °C, and a photocatalyst-supporting film was reheated at 200 °C.

For the test regarding the function of the photocatalyst, the color difference of each sample before and after being exposed in the open air was measured, wherein the exposure period was 6 weeks and the wavelength range of the color difference measurement was from 380 nm to 780 nm. The color difference of each sample was as follows:

Table 1

Sample	Color difference
Non-reheated	6.98
Reheated at 100 °C	4.61
Reheated at 200 °C	2.60

As shown in the above the table 1, the function of a photocatalyst is strengthened by reheating the photocatalyst layer after drying a photocatalyst coating liquid. The "color difference" is caused by the difference in the antifouling property. The applicants' Japanese representative reports that the antifouling property depends on the function of a photocatalyst, in which the photocatalyst activates decomposing chemical reactions with ultraviolet radiation, such as a chemical reaction resulting during a process of pasteurization and decomposition of an organic substance. Thus, because a high function of the photocatalyst results in the activation of a chemical reaction to exert the antifouling property, a sample having a high function of photocatalyst does not cause a change of

color. Therefore, when the sample has a low color difference, the function of the photocatalyst in the sample is high.

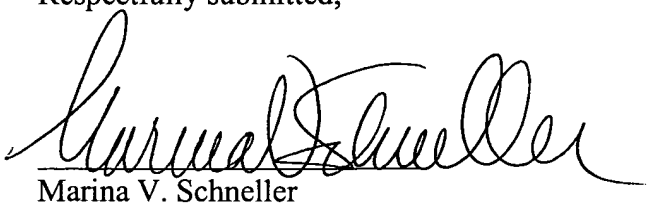
Further applicants' Japanese representative reports, the photocatalyst used in the Declaration was not the same as one used in the present specification. In the Declaration, an acidic titanium nitrate sol which contained titanium oxide at a concentration of 5% by weight and an acidic silica nitrate sol which contained silicon oxide at a concentration of 5% by weight were used as a coating solution for a photocatalyst layer in additional experimental data of the Declaration.

At page 12, lines 19 to 24 of the specification, use of a coating solution for a photocatalyst layer which is composed of a mixture of a silica sol and titanium dioxide sol is described. In addition, on page 12, lines 34 to 36 in the present description, TiO_2 and SnO_2 can be given for the photocatalyst in a photocatalyst layer.

Therefore, it is considered that the photocatalyst-carrying structure of Kimura, which is not reheated, does not have the excellent effect of that of Claim 18.

Reconsideration and an early allowance are respectfully solicited.

Respectfully submitted,



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